PROGRAM CODE

```c
#include<stdio.h>
#include<stdlib.h>

void main()
{
        int n,in,out,bsize,bucket=0,dropped_packets;

        printf("Enter Bucket size = ");
        scanf("%d",&bsize);

        printf("Enter Number of inputs = ");
        scanf("%d",&n);

        printf("Enter Outgoing packet rate = ");
        scanf("%d",&out);

        while(n!=0)
        {
                printf("\nEnter Incoming Packet Size = ");
                scanf("%d",&in);

                if(in+bucket>=bsize)
                {
                        dropped_packets=(in+bucket)-bsize;
                        printf("Dropped packet = %d\n",dropped_packets);
                        bucket=bsize;
                        printf("Bucket status :: %d packets out of %d\n",bucket,bsize);
                }
                else
                {
                        bucket= bucket+in;
                        printf("Bucket status :: %d packets out of %d\n",bucket,bsize);
                }
                bucket=bucket-out;

                if(bucket<0)
                {
                        printf("After Outgoing Bucket status :: 0 out of %d\n",bsize);
                        bucket=0;
                }
                else
                {
                        printf("After Outgoing Bucket status :: %d out of %d\n",bucket,bsize);
                        n--;
                }
        }
}
```

OUTPUT

```
admin_GK@administrator52:~/Desktop$ gcc leaky.c
admin_GK@administrator52:~/Desktop$ ./a.out
Enter Bucket size = 5
Enter Number of inputs = 3
Enter Outgoing packet rate = 2

Enter Incoming Packet Size = 6
Dropped packet = 1
Bucket status :: 5 packets out of 5
After Outgoing Bucket status :: 3 out of 5

Enter Incoming Packet Size = 2
Dropped packet = 0
Bucket status :: 5 packets out of 5
After Outgoing Bucket status :: 3 out of 5

Enter Incoming Packet Size = 1
Bucket status :: 4 packets out of 5
After Outgoing Bucket status :: 2 out of 5
admin_GK@administrator52:~/Desktop$
```